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CONTROVERSY WITHOUT CONFLICT:

HOW GROUP EMOTIONAL AWARENESS AND REGULATION CAN PREVENT CONFLICT ESCALATION

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Controversy without conflict: how group emotional awareness and regulation can prevent conflict escalation

Abstract

Aim:

We investigate whether group emotional awareness can prevent the escalation of controversy into conflict in project teams. We propose that group emotional awareness mitigates the impact of initial task conflicts on the development of group emotion regulation. This, in turn, prevents the escalation of task into relationship conflicts.

Design:

We test our proposed model through a longitudinal design on project teams over the duration of a three-month project, from the onset of their work together till the completion of the project.

Findings:

Group emotional awareness mitigates the impact of high levels of initial task conflict on the development of emotion regulation: the latter lacks conditions to develop when group emotional awareness is low and groups experience task conflict and can only develop under high emotional awareness conditions. Once in place, group emotional regulation reduces the likelihood of task conflicts escalating to relationship conflicts.

Keywords

group emotional awareness; group emotion regulation; task conflict; relationship conflict; time; emergent states.

Introduction

Openness for disagreement and dissenting opinions is one of the key elements of effective decision-making (Curșeu et al. 2012b; De Dreu and West 2001; George and Dane 2016), innovation (West 2002) and reaping the benefits of diversity in teams (van Knippenberg et al. 2004). Research has shown that groups which are open to dissenting or controversial opinions in their discussions (i.e., experience task conflict, cf. Jehn 1995) have a greater propensity for more in-depth analysis of the tasks in question. Not surprisingly, these groups also display a capacity for more complex representations of reality and are more likely to discuss a broader range of alternatives when approaching a particular problem or task (Curșeu et al. 2012b). On its own, *task conflict* (i.e., disagreements between team members on how to approach the task at hand, cf Jehn, 1995) has the potential to increase the quality of decision making and creativity in teams (de Wit et al. 2012). However, continued task-related disagreements may trigger feelings of animosity among the members (Janssen et al 1999) and lead to personality clashes in a team (i.e., *relationship conflict*, cf. Jehn 1995). When relationship conflict erupts, emotional clashes and tensions cloud the task-related effort, since members waste time addressing interpersonal aspects of the group dynamic rather than focusing on the task at hand (Parayitam and Dooley 2009). As such, relationship conflicts are associated with process losses, diminished quality of decisions and effectiveness, and higher chances of team dissolution (De Dreu and Weingart 2003; De Wit et al 2013).

Furthermore, the escalation from task to relationship conflict also depends on when such conflicts occur, as groups react differently to task conflicts depending on the length of time they have been together. Contextual models of conflict which take into account temporal factors show that having task conflicts at an early stage in a group's life is detrimental for group effectiveness, whereas task conflicts that arise in mid-or-late stages of groupwork offer opportunities for more complex cognitive processes and are associated with better performance (Jehn and Mannix 2001). One of the proposed explanations for this phenomenon is that a negative emotional episode that occurs early on in the group's life can quickly become part of the group's emotional history (Kelly and Barsade 2001); that is, it becomes part of their shared representation of teamwork, and can thereby impact future group dynamics.

The affect-based approach to task conflict consequences has received significant support from previous research on group emotional processes. This research showed that groups with well-developed emotion-processing capabilities are better equipped to prevent the escalation of controversy (i.e., task conflict) to interpersonal or relationship conflict because they are more capable of (1) accurately reading the emotional situation of the group (i.e., group emotional awareness) and (2) intervening in time to prevent potential escalation (i.e., group emotion regulation), thereby creating

conditions for successful teamwork (Ayoko et al. 2008; Curșeu et al. 2015). The two emotion-processing capabilities that support the group in dealing with controversy are thus (1) *group emotional awareness* – i.e., the group's capacity to identify (i.e., recognize and understand) the emotional dynamics resulting from group interactions, and (2) *group emotion regulation – i.e.,* the group's ability to work with the emotions felt/expressed as a result of group[1] interactions in the direction of the desired group goals (Yang and Mossholder 2004). Previous research has, however, privileged the study of group emotion regulation as a decoupling mechanism between task and relationship conflict (Ayoko et al. 2008; Yang and Mossholder 2004; Curșeu, et al 2012a).

However, if we assume that these two capabilities (group emotional awareness and regulation) develop diachronically (first emotional awareness, which then creates conditions for the development of emotion regulation), as proposed by Joseph and Newman's (2010) cascading model of emotional capabilities, we would be presented with a new perspective in decoupling task and relationship conflict. On the one hand, this perspective explains why early task conflict is more detrimental for teams (i.e., group emotion regulation strategies have not yet had time to emerge); on the other, it offers a new possibility to address the gaps opened by the preferential study of emotion regulation over emotional awareness, by refocusing on the impact of group emotional awareness on the relation between task and relationship conflict.

Joseph and Newman tested the diachronic development of emotional awareness to regulation at the individual level in two meta-analyses (Joseph and Newman 2010; Joseph et al 2015) of studies conducted in workplace settings, but point to the lack of the longitudinal data as a limitation of the empirical support received so far for the model. Further research has offered support to their claims through both longitudinal studies and at the group level, establishing the group emotional awareness conditions needed for group emotion regulation to emerge (Boroș and Vîrga 2020; Boroș and Curșeu, 2013). Building on the latter line of research, we go beyond merely extrapolating from an individual-level frame of emotional capabilities to the group-level and conceptualize group emotional awareness and regulations as *emergent states* (Boroș and Vîrga 2020). Emergent states have been defined as "constructs that characterize properties of the team that are typically dynamic in nature and vary as a function of team context, inputs, processes, and outcomes" (Marks et al 2001: 357). We then proceed to explore their *development and function in a temporal framework,* in relation to task and relationship conflict. While there is agreement in extant literature that both emotional capabilities and conflict are emergent states, few studies propose designs that allow for a truly dynamic and interactional view of their co-development (Waller et al 2016).

[1] Throughout this paper, we will use the terms 'group' and 'team' interchangeably, meaning the same type of unit: a collection of individuals sharing a common goal who interact and are interdependent in their efforts to reach that goal.

For the past two decades (starting with McGrath et al 2000 and culminating with the review of Waller et al 2016) there has been an active, ongoing conversation on the dynamic vs static nature of models in the field of group dynamics. Cronin et al (2011) and Waller et al (2016) stress that most research so far fails to adequately examine the dynamic nature of emergent states. More precisely, Waller et al.'s (2016) review of the literature on emergent states concludes that "a notable absence in the study of emergent states is explicit consideration of temporal dynamics. For instance, there is little discussion of the duration in time it may take for an emergent state to appear or to change. […] in this literature, we treat all emergent states as having similar temporal properties and trajectories" (p.587). With this study, we aim to contribute to the literature that examines the dynamic interactions between emergent states by using a research design which explicitly takes the temporal dimension of emerging states into account.

Theoretical background

Factoring time in the controversy-conflict debate

The most common distinction in conflict literature is between task conflict (disagreements about the content of the task due to different viewpoints, opinions and ideas – which we refer to as controversy) and relationship conflict (interpersonal incompatibilities and frictions among the group members resulting in tension, annoyance and animosity) (Jehn 1995). While it is generally agreed that relationship conflict has negative outcomes for the group, the impact of task conflict on its own has received mixed evidence (De Dreu and Weingart 2003; De Wit et al. 2012; De Wit et al. 2013). Task conflict can enhance a group's understanding of the problem and lead to better decisions, but it might also hinder implementation, interfere with consensus and reduce the acceptance of the final decision (Amason and Schweiger 1994; Jehn and Mannix 2001). To explain this paradox, Jehn and Mannix (2001) propose taking a time-related view on the occurrence of task conflict in a team's life. Task conflict that occurs too early in a team's life may interfere with discussing important procedural issues or may pull a team away from its purpose, while its occurrence too late in a team's life might reduce consensus and threaten implementation. High-performing groups appear to experience an increase of task conflict at the mid-point of their work together. Jehn and Mannix suggest that "in groups that have managed relationship conflict well up to this point, members are likely to be comfortable with each other and able to engage in task-related conflict without its turning into personal attacks. Laying the groundwork in the early stages of interaction will allow groups to make this crucial transition, in which they focus solely on the task, rather than on procedures or relationships" (Jehn and Mannix 2001: 241).

Kelly and Barsade's (2001) account of emotional episodes might provide further explanation into this time-bound impact of task conflict in a group's life. According to their research, every emotional

experience felt by a group, whether it is intense or mild in nature, adds to and becomes part of the group's particular emotional history and will be reflected in their shared representation. This will then create expectations for emotional expression in future group interactions as well as behaviours in those interactions (Kelly and Barsade 2001). As emotions lead to reinforcing emotional cycles, the group's emotional history could lead to self-reinforcing spirals of negativity or positivity (Kelly and Barsade 2001). Hence, even one-time events can shape the future affect-related expectations of the group. Since the most salient cause of negative emotions in groups is likely triggered by conflict, it makes sense to assume that the detrimental impact of early conflict (be it task or relationship) in a group's life is explained by the negative emotional spiralling it triggers. Following this line of reasoning, previous researchers looked into the impact of emotion regulation strategies on the escalation of task conflict (Ayoko et al. 2008; Curşeu, et al. 2012a; Yang and Mossholder 2004), demonstrating that teams that are able to deal appropriately with the negative emotions triggered by conflict will not allow it to escalate and will be able to reap the benefits of the complex views of a problem that task conflict engenders (De Wit et al. 2013).

From awareness to regulation: how groups develop emotional capabilities to deal with conflict

Group emotion regulation is the process of bridging the gap between current and desired emotional states (Yang and Mossholder, 2004); it encompasses "the processes by which individuals influence which emotions they have, when they have them, and how they experience and express these emotions" (Gross 1998: 275). Group emotion regulation is in other words a control function through which groups try to maintain those emotions that are beneficial for the group and deal with disruptive affective events or states in the group. Within organizational settings, emotion regulation is related to job performance through the induction of affective states that are beneficial to job performance. That is, emotion regulation is the tool through which we create and maintain positive affective states, which have been suggested to benefit work behaviour (George 1990; Joseph and Newman 2010). Groups with poor emotion regulation experience less cooperation and positive emotions (Baron et al. 1990; Forgas 1998) while at the same time are fraught with more intense task and relationship conflicts (Ayoko et al. 2008). Furthermore, because they cannot properly deal with the downward affective spiral caused by continued task conflicts (Simons and Peterson 2001), groups with low emotion regulation are more likely to misinterpret task-related disagreements as personal attacks and thus the likelihood of relationship conflict is higher. Hence, group emotion regulation is a core contingency for the interplay of task and relationship conflict (Yang and Mossholder 2004).

Group emotion regulation is an emergent state (Yang and Mossholder 2004). According to Marks et al (2001), this implies that (1) it develops in time through the dynamics of the group (2) which in turn influences subsequent dynamics (Ayoko et al. 2008), and (3) it characterises the group as entity (thus

going beyond individual traits of group members). Extant evidence at both the individual and group level supports the view that regulation is not an early emergent state, i.e., it depends on the emergence of other states (namely group emotional awareness) to develop.

At the individual level, the cascading model of emotional intelligence (Joseph and Newman 2010) brings evidence from two meta-analyses (Joseph and Newman 2010, Joseph et al 2015) that emotion regulation strategies depend on the development of emotional awareness. Individuals that are more aware of the verbal and nonverbal cues in their environments relating to emotions, as well as their own emotional states (i.e., have greater emotional awareness), subsequently have a larger base of emotional information. The accrual of a larger and more accurate base of emotional information then enables more accurate appraisal and more appropriate response formation (Joseph and Newman 2010).

The same holds true at the group level: previous research (Boroș et al 2016, Boroș and Vîrga 2020) has repeatedly demonstrated that emotional awareness and regulation have a chronological build-up, in which awareness leads to regulation. Group emotional awareness emerges from the interaction of compositional effects (team members' individual emotional awareness capabilities) and group norms regarding emotional awareness (Boroș and Vîrga 2020). The development of group emotional awareness as an emergent state shapes in turn the emergence of group emotion regulation. Furthermore, extant evidence reveals that only an optimal level of group emotional awareness is beneficial for the development of adaptive regulation. Either strategy of building group emotional awareness (via individual capabilities or group norms) is valid and subsequently leads to the emergence of group emotion regulation: groups composed of members with low individual-level awareness can capitalise on group emotional awareness norms to compensate for their members' low awareness capabilities and develop equally effecient regulatory strategies as groups formed of emotionally aware people. However, personal propensity towards awareness, doubled by explicit awareness norms, blocks the development of regulatory strategies (Boroș and Vîrga 2020). This research shows that (1) both group emotional awareness and regulation are emergent states, and that (2) awareness precedes and shapes the development of regulation.

Group emotional awareness also acts as a mitigating factor in how the group comes to conceive of and represent the negative emotional connotations of conflicts (Kelly and Barsade 2001). Groups that can appraise correctly the various emotions generated by conflict and understand their full meaning (i.e., high group emotional awareness) from early on will be able to avoid the misattributions that accompany the escalation of conflict (Simons and Peterson 2001). In doing so, they can recognize in time and prevent falling into the downward emotional spirals (Yang and Mossholder 2004) that accompany the transformation of task into relationship conflict. We can then speculate that their shared representation about dealing with conflict will be more adapted to dealing with conflictual

situations and will consequently enable them to manage conflict in more adaptive ways (as it will be less clouded by misattributions of intentions which build up relational conflict history).

Evidence supporting this proposition comes from studies of conflict management styles used in professional teams. This evidence suggests that not only do teams with greater awareness experience less conflict escalation (i.e., lower levels of relational conflict throughout the group life), but they can better deal with conflict asymmetry (i.e., different perceptions of how much conflict the group experiences) by using collaborating rather than avoiding or contending conflict management styles (Boroș et al 2016). Consequently, previous studies show that prevention of conflict escalation in empathic/emotionally aware groups is correlated with increased cohesion and performance (Rapisarda 2002), and that even if conflict does occur in these teams, the choice of adaptive conflict management strategies then positively impacts coordination and ultimately performance (Boroș et al 2016).

In sum, previous research suggests that the correct read of the emotional field (i.e., group emotional awareness) leads to less misattributions and thus a more accurate representation of the causes and evolution of conflict (Bell and Song 2005). This representation allows for the choice of more adaptive conflict management strategies at *behavioural level* when faced with solving the conflict (Boroș et al 2016; Shih and Susanto 2010). What is currently missing is a better view on the *emotional level* of these group dynamics. While no previous studies have dealt directly with how early task conflict impacts the development of emotion regulation strategies depending on their levels of group emotional awareness, based on the evidence reviewed here regarding the choice of conflict management strategies of these teams, we suggest that more emotionally aware groups will also develop better regulation strategies to deal with early task conflict than teams lacking group emotional awareness. More specifically, we propose that the level of group emotional awareness will mitigate the negative effects of early task conflict onto the development of group emotion regulation, and subsequently on relational conflict.

Hypothesis 1: Group emotional awareness moderates the relation between early task conflict and group emotion regulation such that, when group emotional awareness is low, increasing levels of early task conflict would significantly decrease group emotion regulation; when group emotional awareness is high, early task conflict will not have a significant negative effect on group emotion regulation.

Hypothesis 2: Group emotion regulation mediates the interactive effects of initial task conflict and group emotional awareness on subsequent relationship conflict development.

To summarize, we propose that the magnitude of task conflict situation faced by groups with or without emotional awareness norms at the start of a group's life shapes the development of emotional

regulatory strategies in the future, which then impacts the escalation of task to relationship conflict. We investigate this moderated mediation prediction in a cross-lagged study on real project teams.

Method

Respondents and procedure

Our study is a cross-lagged survey of 528 students, all attending Bachelor or Masters level courses at the same department of a Dutch university. 53.4% of our respondents were male, 45.3% female; they were aged 16 to 34 (M=21.10, SD=2.54). The students were attending one of the four courses: Organizational Behaviour, Organization Development, Organization Theory, and Research in Organizations. During the course, they were organized 98 student project teams of 3-7 members each (M=4.71, SD=1.38) over a three-month period, with the requirement to complete a research project together. Two of the projects were desk/theoretical research, two empirical research projects, around one of the topics taught in the respective course. All projects require some sort of research endeavour (be it theoretical or empirical) and a 20-page research report. Students were assessed with the same research project criteria used for their final thesis (MA – empirical research, BA – theoretical research): research problem and relevance of the research; theoretical background; methodological framework/research strategy; literature references. The projects were hence similar in their requirements, level of complexity and difficulty, and required them to interact and work together if they were to ensure both quality of research and a good flow of the final report, as well as on time delivery. Throughout the duration of the project, students had regular interactions (inside and outside class) and worked together on their projects.

The data was collected as part of a collaborative research project on social networks of teams. In two different course workshops (4 weeks apart), students were asked to fill out questionnaires that evaluated the variables included in the study. We measured group emotional awareness, group emotion regulation, and task and relationship conflict at both times. Additionally, we gathered data on demographic characteristics (age, gender) and the amount of time they spent working together and individually for the project. The first survey was given within two weeks of the start of the project and the time period between the two measures covered 4 weeks. We focused on collecting data from the first half of the groups' project life, since previous research from Tuckman onwards showed consistently that the first half-life of a team is when group dynamics are most intense, while during the second half groups focus more on the actual task. This first half is also when early emergent states occur and influence the emergence of subsequent ones (Marks et al 2001).

Measures

Group emotional awareness was measured through the three-item scale proposed by Boroș et al (2016). The three items were: 'We knew how everyone felt just by looking at each other.'; 'We could tell how everyone felt by listening to the tone of our voices.', and 'Most of the time, we had a good sense of how each group member felt, even if they did not express it in words.' The Cronbach's alpha for this scale was .76. We also calculated the inter-rater agreement between team members using r_{wg} (as recommended by Troth et al 2011). The r_{wg} at T1 was 0.88 (SD .07) and at T2 it was 0.86 (SD .14).

Group emotion regulation. The five items evaluating group emotion regulation were measured with the scale proposed by Curşeu et al. (2012a) (e.g., "The group was generally able to influence how individual members felt"). Answers were recorded on a Likert scale ranging from 1 (= not at all) to 5 (= very much). Scores on items such as "It was difficult to calm down quickly when we got mad at each other" were reversed so that higher scores reflected more effective emotion regulation. The Cronbach's alpha was .67. Since this is below the traditional point of 0.7, we checked which items should be deleted to increase the reliability of the scale. These turned out to be the two reverted items of the scale. As a consequence of this result, we also checked for attention issues on the side of the respondents in the database by considering if the values for reverted items changed from the direct questions, but we did not identify respondents who answered 'blindly' – i.e., just ticked the same score. We also performed confirmatory factor analysis with and without the reverted items in the regulation scale. For both models, we obtained a good fit (i.e., $p>.05$ for Chi^2, $RMSEA<.08$). Given the comparable fit indices, and because from a content validity perspective we thought it important to capture both formulations in the regulation measure, we decided to continue with the scale in its original format (as previous research using it confirmed its validity and reliability repeatedly – see Curșeu et al 2012a; Boroș and Vîrga 2020). The r_{wg} at T1 was 0.85 (SD .13) and at T2 it was 0.82 (SD .17).

We measured *task and relationship conflict* with the eight items (four for task conflict and four for relationship conflict) from the intra-team conflict scale introduced by Jehn (Jehn 1997; Jehn et al. 1999). The answers were recorded on a five-point Likert scale (from 1 - strongly disagree to 5 - strongly agree). Cronbach's alpha for task conflict was 0.89, and for relationship conflict 0.79. The r_{wg} for task conflict was 0.88 (SD .09) at T1 and 0.84 (SD .18) at T2. For relationship conflict, it was 0.88 (SD .11) at T1 and 0.85 (SD .16) at T2.

For all the measures, respondents answered individually, and we aggregated the data at team-level by considering the average of a team member's responses to each scale. Following Troth et al (2011), we calculated the inter-rater agreement (rwg) scores for each scale to see if the data could be aggregated at team level. The rwg scores presented above are all above 0.80, which justifies the validity of aggregating the data at team-level and using the group average to do so.

Control variables

Based on previous group diversity research (Amason and Sapienza, 1997; Aubé, Rousseau and Tremblay 2011; Williams and Meân 2004), we controlled for four variables, in light of their possible impact on the quality of group dynamics. These variables were: group size, gender and age diversity in groups, as well as degree of interdependence in performing the task.

Group size. Previous research signalled that group size (especially above 7 group members) can be damaging for group dynamics and performance (Aubé et al. 2011, Amason and Sapienza 1997). We tried to limit this by having groups of 3-7 members only (which is within one standard deviation of the ideal number 5), and in addition to that controlled for group size effects in our analyses.

Diversity in age. Since our sample included participants with very different ages (some of the Masters students were significantly older than their colleagues), we investigated whether these age differences played a part in the emotional and conflict dynamics of our groups (Horwitz and Horwitz 2007). We measured the extent to which group members' age was dissimilar through age variance at group level and controlled for this in our analyses.

Gender composition. Previous research demonstrated that the gender composition of the group can impact both the level of group emotional competences (awareness and regulation) as well as their impact on the group's performance (Boroș and Curșeu 2013, Curșeu et al 2015). We therefore controlled for the gender composition of our groups in the analyses. Williams and Meân (2004) advise in their methodological review that the proportion of women in a group is the most accurate way to measure gender composition in work groups. We consequently adopted this measure and added proportion of women (reported within the 0-1 limits, with 0 meaning no women in the group and 1 meaning 100% women in the group) as a control variable.

Task interdependence: Task interdependence has been proven to be one of the most systematically predictive variables of group effectiveness in general (Mathieu et al 2008) and of conflict development in particular (Jehn et al 1999). Because of this, it was important to understand to what extent, our respondents chose to truly work interdependently, as the task required, or instead opted to split the project work in smaller subtasks they could work on independently. To measure that, we looked into the ratio between the time they spent working together and time spent working individually on the project and controlled for the group-to-individual time ratio variable in our analyses.

Results

Table 1 presents the descriptive statistics for the variables in the model and the matrix of intercorrelations. We first looked at the possible control variables resulting from the theoretical rationale: age variance, proportion of women, group size and worktime ration (group vs individual). Two of these controls have significant correlations with the moderator and mediator in our model, so

we introduce them in the regression equation for the moderated mediation model: proportion of women and worktime ratio. For the sake of working with enough power (as already our model included 7 variables on a sample of only 98 valid cases), we did not include age variance and group size, as they did not correlate significantly with any variable in our model.

Insert Table 1 around here

In order to test the conditional indirect effect of task conflict and group emotional awareness on relationship conflict via group emotion regulation, we used the process procedure described in Hayes (2013) – Model 7 (5000 bootstrap samples, 95% confidence interval). The obtained results are summarized in Table 2.

Insert Table 2 around here

Our data shows a significant impact of the interaction between task conflict (at time 1) and group emotional awareness (at time 1) on the development of group emotion regulation (at time 2): b=.41, s.e.=.17, p=.02 (i.e., *Hypothesis 1* supported by data). Taking a closer look at the interaction slopes, we see that for low levels of group emotional awareness, the effect is negative and significant (b=-.22, s.e.=.10, p=.03); negative but not significant for average levels of group emotional awareness (b=-.07, s.e.=.08, n.s.), and positive but not significant for high levels of emotional awareness: b=.05, s.e.=0.9, n.s.). Figure 1 illustrates these slopes. An interesting aspect to notice in these slopes is the change in sign/direction, from low and average group emotional awareness (negative sign, downward slope) to high group emotional awareness (positive sign, upward slope).

Insert Figure 1 around here

The index of moderated mediation (Preacher, Rucker and Hayes 2007) shows us that the indirect effect of task conflict and group emotional awareness is conditioned on the level of the moderator variable, since 0 does not fall between the lower and upper limit of the 95% confidence interval (-.51; -.02) (i.e., *Hypothesis 2* supported by data). Table 2 presents an overview of the detailed results of the direct and indirect conditional effects.

To sum up, we observed that the conditional indirect effects of task conflict (at time 1) and emotional awareness (at time 1) on relationship conflict (at time 2) are partially mediated by emotion regulation (detailed overview reported in Table 2b), in a way that task conflict hinders the emergence of emotion

regulation strategies in teams with low levels of group emotional awareness and has no detrimental effects in teams with average or high group emotional awareness. In other words, emotionally aware teams are better able to handle task conflict and develop proper emotion regulation strategies as they move further with the work. Subsequently, they report less relationship conflict at time 2. Our data shows that as expected, less emotionally aware teams developed levels of relationship conflict proportional with the task conflict experienced at time 1, but emotionally aware teams prevented the development of this relation (see Table 2c for an overview of the corresponding indicators). There is a marked inverted relation between emotion regulation and relationship conflict at time 2 (b=-.65, s.e.=.10, p=.00).

Regarding the control variables, gender composition (i.e., proportion of women) had a significant positive impact on both group emotion regulation b=.17, s.e.=.10, p=.01 and relationship conflict at time 2: b=.28, s.e.=.10, p=.02. In other words, the more women in a group, the higher the level of group emotion regulation but also more experienced relationship conflict. Worktime ratio (group/individual) did not have a significant impact on group emotion regulation, b=.01, s.e.=.01, n.s., but did on relationship conflict (T2): b=-.05, s.e.=.02, p=.00: groups that experienced high relationship conflict had spent more time individually than together in working for the project. Early relationship conflict (T1) had a significant impact on both group emotion regulation (b=-.28, s.e.=.10, p=.01) and later relationship conflict (T2) levels (b=.22, s.e.=.12, p=.08).

Discussion

In the present research, we set out to gain a better understanding on how group emotional awareness and regulation shape the escalation from task to relationship conflict.

Previous research has investigated the impact of group emotion regulation on the relation between task and relationship conflict (Ayoko et al. 2008; Curșeu et al. 2012a; Yang and Mossholder 2004). Our data adds to the existing evidence that emotion regulation can indeed prevent (or reduce) the transformation of task conflict into relationship conflict. In our study, however, we went a step further and explored how the presence of task conflict in the early stages of group work shapes the development of emotion regulation strategies in groups, depending on their levels of group emotional awareness. Groups with higher group emotional awareness seem to be better able to understand the affective tones associated with task conflict and not spiral down in misattributions (Simons and Peterson 2001). That is, they read the situation more accurately and develop appropriate emotion regulation strategies to deal with it and stay on task (Gross and Thompson 2007; Wadlinger and Isaacowitz 2011). Consequently, group emotional awareness mitigated the negative impact of early task conflict on the development of group emotion regulation strategies. In turn, these helped prevent the escalation of task into relationship conflict.

To summarize, developing group emotional awareness early on in a group's life (either by selecting team members with high individual emotional awareness or by helping the team develop norms for emotional awareness – Boroș and Vîrga 2020) is beneficial for them in confronting controversy without falling into relationship conflicts. This finding is especially relevant for teams working on complex tasks, or teams that need (or are faced with) a high level of diversity of their members – both of which imply that the expression of potentially very divergent views is a condition of good team functioning. For the latter situation, previous research (Boroș et al. 2019) shows that in (multiculturally) diverse groups, emotion suppression (a primitive and long-term-non-adaptive emotion regulation strategy) prevents people from reaching out for advice to culturally different others, and instead either diminishes their support networks (especially true for people coming from individualistic cultures) or (always) leads to a preference for building these networks with people that are perceived as representing a higher degree of similarity, thereby not benefiting from the resource advantages that diversity offers. Adaptive emotion regulation strategies are thus essential to actualize the diversity advantage in organizations. Without them, we keep to established norms and habits and do not challenge ourselves to expand our horizons simply because we cannot handle the emotional burden this process causes.

To advance to these adaptive regulation strategies however, the key is first and foremost to develop high group emotional awareness. Being aware of and trying to understand the emotional dynamics in diverse groups is the key to reaping the benefits of diversity. Previous research shows that groups that do not develop diversity awareness norms can still benefit from the diversity advantage in their group effectiveness if they are able to develop greater group emotional awareness (Boroș and Curșeu 2013). Just as acceptance is a necessary step before adaptation in intercultural sensitivity (Bennett 1993), emotional awareness is needed to build emotion regulation in groups.

This last statement holds true not just in diverse teams, as our research clearly shows. Homogenous teams also show equal benefit from developing early group emotional awareness, which allows them to work with (instead of try to minimise) the cognitive and interactional complexity of holding diverging views on the task at hand (i.e., experiencing task conflict). These findings suggest that emotional training would be more valuable in organizations than diversity trainings. Learning to make room for other people's feelings and the (not always positive) group emotional dynamics in teamwork is vital to becoming more inclusive. By giving emotions their rightful place and working with them as they emerge, we can disentangle them from the task, thereby allowing more cognitive complexity and consequently devising better solutions to the ambiguous and complex problems groups in organizations are asked to tackle.

Limitations

Along with the contributions our paper makes, it comes with limitations which open directions for future research. The immediate limitation is that as we chose to focus on teams with no previous

history for the entire duration of a project we opted for a sample population of students (seeing that in organisational settings it would be difficult to find enough comparable groups with no previous history). We opted for a real-life setting instead of an experimental condition with actual teams, and in making this choice we sacrificed the workplace dimension. Because of the sample, the effects we evidenced could be different due to age, experience and stakes in a project. Previous research already pointed out that the impact of group emotional awareness is different in less mature teams than in experienced ones. However, the direction of this effect (i.e., less mature teams with high emotional awareness experienced a reduction in performance) makes the effects evidenced in our study even more relevant. Second, as the data for all our variables were collected from the same source, there is a risk of common method bias in our results. However, Evans (1985) argues that when testing an interaction effect the common method bias is less of a problem for designs. Nonetheless, future research should investigate further the validity of our findings in more controlled designs and with more mature teams, in workplace settings.

Conclusions and implications

In concert with other researchers (Gray and Schruijer 2010), we concur in not demonizing conflict as the big bad wolf in any teamwork narrative. While we do not advise fostering conflict, we stress the importance of healthy controversy, or task conflict in teams, along with helping groups build norms for emotional awareness. When these norms exist, controversy can become beneficial for group performance through the increase of the group's cognitive complexity (Curșeu et al. 2012b). In line with Joseph and Newman (2010), we believe that group emotional awareness is a precondition for the capacity to select emotion regulation strategies that are relatively less exhaustive of resources. As such, groups high in emotional awareness will match their chosen regulation strategy (surface vs. deep acting; antecedent- vs. response-focused) to the demands of the task (Gross and Thompson 2007) and to the quantity of resources at hand, thereby maintaining a higher degree of efficiency in overall performance (Boroș et al. 2016).

Lastly, our findings are relevant both for the development of theory and for practitioners: from a theoretical stand-point, it adds to the growing body of evidence that tries to offer more insight and conceptual clarity into the studies of emotions in the workplace in general (George and Dane 2016), and in relation to conflicts in particular (Jordan and Troth 2002). In offering a more precise conceptualization of emergence (with an emphasis on the dynamic interplay of emotional capabilities and conflict), we hope to help advance explorations of teams from a dynamic perspective, answering thereby the call for research that moves the field of group dynamics away from research "that primarily studies group statics" (Waller et al 2016: 562).

From the perspective of a practitioner, our research offers valuable insights into the kind of emotional capabilities organizations should focus on developing in their teams in order to support their

adaptiveness and performance. The highest gains for teams are provided by focusing on developing group emotional awareness from the onset of group work (formation). This can be done either through interventions as simple as discussing group norms for perspective taking and reciprocal understanding (Druskat & Wolff 2001; Boroș and Vîrga 2020), or even through merely fostering positive expectations about the group's emotional awareness capabilities (Boroș and Vîrga 2020). Focusing on these early group emotional awareness interventions benefits team performance in general (Boroș et al. 206) and sows the seeds for reaping the benefits of diversity in teams (Boroș et al. 2019).

References

Amason AC, Sapienza HJ (1997). The effects of top management team size and interaction norms on cognitive and affective conflict. J. Manag *23*: 495-516. doi: 10.1016/S0149-2063(97)90045-3

Amason AC, Schweiger DM (1994) Resolving the paradox of conflict, strategic decision making, and organizational performance. Int J Confl Manag 5:239-253. doi: 10.1108/eb022745

Aubé C, Rousseau V, Tremblay S (2011). Team size and quality of group experience: the more the merrier?. Group Dyn. Theory Res. Pract. *15:* 357-375. Doi: 10.1037/a0025400

Ayoko OB, Callan VJ, Härtel CE (2008) The influence of team emotional intelligence climate on conflict and team members' reactions to conflict. Small Gr Res 39:121-149. doi: 10.1177/1046496407304921

Baron R, Fortin SP, Frei RL, Hauver LA, Shack ML (1990) Reducing organizational conflict: The role of socially-induced positive affect. Int J Confl Manag 1:132-152. doi: 10.1108/eb022677

Bell C, Song F (2005) Emotions in the conflict process: an application of the cognitive appraisal model of emotions to conflict management. Int J Confl Manag 16:30-54. doi: 10.1108/eb022922

Bennett MJ (1993). Towards ethnorelativism: A developmental model of intercultural sensitivity. In R.M. Paige (Ed.) Education for the intercultural experience (2nd ed.,pp. 21-71). Yarmouth, ME: Intercultural Press.

Boroș S, Curșeu PL (2013) 'Would you like to talk about that?' How and when group emotional awareness enhances effectiveness of gender diverse teams. Psihol Resur Um 11:45-56. doi: 10.24837/pru.2013.2.106

Boroș S, van Gorp L, Boiger M (2019) When Holding in Prevents From Reaching Out: Emotion Suppression and Social Support-Seeking in Multicultural Groups. Front Psychol. 10: 2431. doi.org/10.3389/fpsyg.2019.02431

Boroș S, van Gorp L, Cardoen B, Boute R (2016) Breaking Silos: A Field Experiment on Relational Conflict Management in Cross-Functional Teams. Gr Decis Negot 26: 327–356. doi: 10.1007/s10726-016-9487-5

Boroș & Vîrga (2020). Too much love will kill you: the development and function of group emotional awareness. Team Perform. Manag. Online first. doi: 10.1108/TPM-07-2019-0081

Cronin MA, Weingart LR, Todorova G (2011) Dynamics in groups: Are we there yet? Acad. Manag. Ann. 5: 571–612. doi: 10.1080/19416520.2011.590297

Curșeu P, Boroș S, Oerlemans L (2012a) Task and relationship conflict in ad-hoc and permanent groups: The critical role of emotion regulation. Int J Confl Manag 23:97-107. doi: 10.1108/10444061211199331

Curşeu PL, Pluut H, Boroş S, Meslec N (2015) The magic of collective emotional intelligence in learning groups: No guys needed for the spell!. Br J Psychol 106:217-234. doi: 10.1111/bjop.12075

Curşeu PL, Schruijer SG, Boroş S (2012b) Socially rejected while cognitively successful? The impact of minority dissent on groups' cognitive complexity. Br J Soc Psychol 51:570-582. doi: 10.1111/j.2044-8309.2011.02023.x

De Dreu CK, Weingart LR (2003) Task versus relationship conflict, team performance, and team member satisfaction: a meta-analysis. J Appl Psychol 88:741-749. doi: 10.1037/0021-9010.88.4.741

De Dreu CK, West MA (2001) Minority dissent and team innovation: the importance of participation in decision making. J Appl Psychol 86:1191-1201. doi: 10.1037/0021-9010.86.6.1191

De Wit FR, Greer LL, Jehn KA (2012) The paradox of intragroup conflict: a meta-analysis. J Appl Psychol 97:360-390. doi: 10.1037/a0024844

De Wit FR, Jehn KA, Scheepers D (2013) Task Conflict, Information Processing, and Decision-Making: The Deteriorating Effect of Relationship Conflict. Organ Behav Hum Decis Process 122:177-189. doi: 10.1016/j.obhdp.2013.07.002

Druskat VU, Wolff SB (2001) Building the emotional intelligence of groups. Harv Bus Rev 79:81-90.

Elfenbein HA (2006) Team Emotional Intelligence: What it can mean and how it can impact performance. In: Druskat V, Sala F, Mount G (Eds) The link between emotional intelligence and effective performance. NJ: Lawrence Erlbaum, Mahwah, pp 165-184

Evans MG. 1985. A Monte Carlo study of the effects of correlated method variance in moderated multiple regression analysis. Organ. Behav. Hum. Decis. Process. 36:305–23. doi: 10.1016/0749-5978(85)90002-0

Forgas JP (1998) On feeling good and getting your way: Mood effects on negotiator cognition and bargaining strategies. J Personal Soc Psychol 74:565-577. doi: 5500fd710cf2de950a71d684

George JM (1990) Personality, affect, and behavior in groups. J Appl Psychol 75:107-116. doi: 10.1037/0021-9010.75.2.107

George JM, Dane E (2016) Affect, emotion, and decision making. Organ Behav Hum Decis Pocess 136:47-55. doi: 10.1016/j.obhdp.2016.06.004

Gray B, Schruijer S (2010) Integrating Multiple Voices: Working with Collusion in Multiparty Collaborations. In: Steyaert C, Van Looy B (Eds) Relational Practices, Participative Organizing, 7th edn. Emerald Group Publishing Limited, Bingley, pp 121-135

Gross JJ (1998) The emerging field of emotion regulation: An integrative review. Rev Gen Psychol 2:271-299. doi: 10.1037/1089-2680.2.3.271

Gross JJ, Thompson RA (2007) Emotion regulation: Conceptual foundations. In: Gross JJ (Ed) Handbook of emotion regulation. Guilford Press, New York, pp 3-24

Horwitz SK, Horwitz IB (2007) The effects of team diversity on team outcomes: A meta-analytic review of team demography. J. Manag. 33:987–1015. doi: 10.1177/0149206307308587

Janssen O, van de Vliert E, Veenstra C (1999) How task and person conflict shape the role of positive interdependence in management teams. J Manag 25:117-142. doi: 10.1016/S0149-2063(99)80006-3

Jehn KA (1995) A multimethod examination of the benefits and detriments of intragroup conflict. Adm Sci Q 40:256-282. doi: 10.2307/2393638

Jehn KA (1997) A qualitative analysis of conflict types and dimensions in organizational groups. Adm Sci Q 42:530-557. doi: 10.2307/2393737

Jehn KA, Northcraft GB, Neale MA (1999) Why differences make a difference: A field study of diversity, conflict and performance in workgroups.Adm Sci Q 44:741-763. doi: 10.2307/2667054

Jehn KA, Mannix EA (2001) The dynamic nature of conflict: A longitudinal study of intragroup conflict and group performance. Acad Manag J 44:238-251. doi: 10.2307/3069453

Jordan PJ, Troth AC (2002) Emotional intelligence and conflict resolution: Implications for human resource development. Adv Dev Hum Resour 4:62-79. doi: 10.1177/1523422302004001005

Joseph DL, Newman DA (2010) Emotional Intelligence: An Integrative Meta-Analysis and Cascading Model. J Appl Psychol 95:54-78. doi: 10.1037/a0017286

Joseph DL, Jin J, Newman DA, O'Boyle EH (2015) Why does self-reported emotional intelligence predict job performance? A meta-analytic investigation of mixed EI. J Appl Psychol 100:298-342. doi: 10.1037/a0037681

Kelly J, Barsade S (2001) Mood and emotions in small groups and work teams. Organ Behav Hum Decis Pocess 86:99-130. doi: 10.1006/obhd.2001.2974

Marks MA, Mathieu JE, Zaccaro SJ (2001) A temporally based framework and taxonomy of team processes. Acad Manag Rev 26:356-376. doi: 10.5465/AMR.2001.4845785

Mathieu J, Maynard, MT, Rapp T, Gilson L (2008) Team effectiveness 1997-2007: A review of recent advancements and a glimpse into the future. J Manag 34: 410-476. doi:10.1177/0149206308316061

McGrath JE, Arrow H, Berdahl JL (2000) The study of groups: Past, present, and future. Pers. Soc. Psychol. Rev. 4: 95–105. doi: 10.1207/S15327957PSPR0401_8

Parayitam S, Dooley RS (2009) The interplay between cognitive- and affective conflict and cognition- and affect-based trust in influencing decision outcomes. J Bus Res 62:789-796. doi: 10.1016/j.jbusres.2008.02.006

Preacher KJ, Rucker DD, Hayes AF (2007) Addressing moderated mediation hypotheses: Theory, methods, and prescriptions. Multivariate Behavioral Research 42:185-227. doi: 10.1080/00273170701341316

Rapisarda BA (2002) The impact of emotional intelligence on work team cohesiveness and performance. Int J Organ Anal 10:363-379. doi: 10.1108/eb028958

Shih H, Susanto E (2010) Conflict management styles, emotional intelligence and job performance in public organizations. Int J Confl Manag 21:147-168. doi: 10.1108/10444061011037387

Simons TL, Peterson RS (2001) Task conflict and relationship conflict in top management teams: The pivotal role of intra-group trust. J Appl Psychol 85:102-111. doi: 10.1037/0021-9010.85.1.102

Troth AC & Jordan, PJ Lawrence, SA, Tse, H (2011) A multilevel model of emotional intelligence and communication performance in teams. J. Organiz. Behav. 33: 700-722. doi: 10.1002/job

Van Knippenberg D, de Dreu CK, Homan AC (2004). Work group diversity and group performance: an integrative model and research agenda. J Appl Psychol 89:1008-1022. doi: 10.1037/0021-9010.89.6.1008

Wadlinger HA, Isaacowitz DM (2011) Fixing our focus: Training attention to regulate emotion. Personal Soc Psychol Rev 15:75-102. doi: 10.1177/1088868310365565

Waller MJ, Okhuysen GA, Saghafian M (2016) Conceptualizing emergent states: A strategy to advance the study of group dynamics. Acad. Manag. Ann. 10: 561-598. doi: 10.1080/19416520.2016.1120958

West MA (2002) Sparkling fountains or stagnant ponds: An integrative model of creativity and innovation implementation in work groups. Appl Psychol: Int Rev 51:355-387. doi: 10.1111/1464-0597.00951

Williams HM & Meân LJ (2004). Measuring gender composition in work groups: A comparison of existing methods. Org Res Meth 7:456-474. doi: 10.1177/1094428104269175

Yang J, Mossholder KW (2004) Decoupling task conflict and relationship conflict: The role of intragroup emotional processing. Organ Behav Hum Decis Pocess 25:589-605. doi: 10.1002/job.

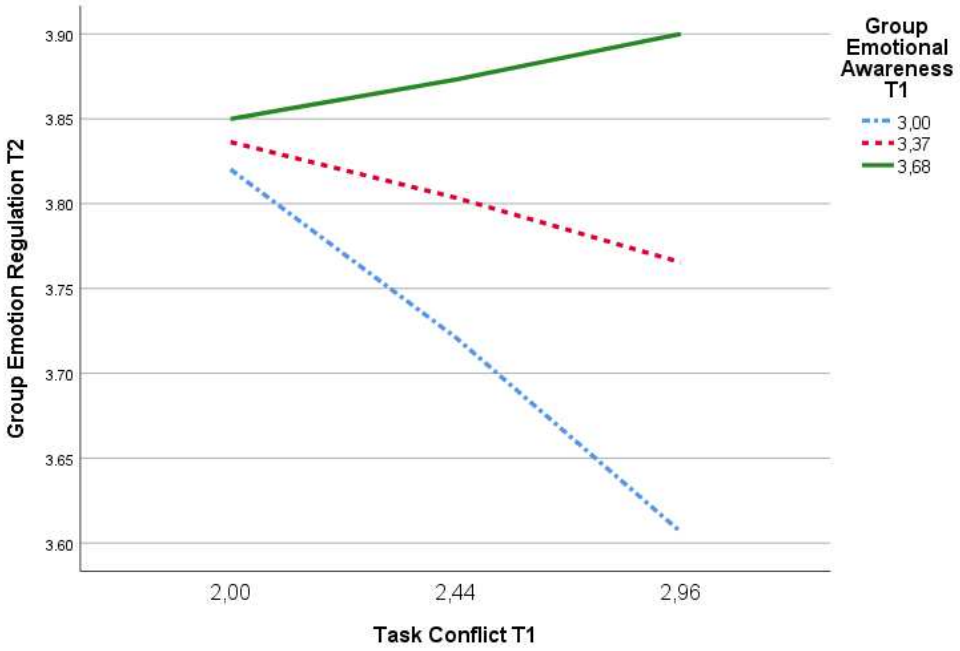

Figure 1. Interaction slopes for initial group emotional awareness (time 1) and task conflict (time 1) on the emergence of group emotion regulation (time 2)

Table 1. Correlation matrix and descriptive statistics

	Mean	S.D.	Group emotional awareness T1	Group emotion regulation T1	Task conflict T1	Relationship conflict T1	Group emotional awareness T2	Group emotion regulation T2	Task conflict T2	Relationship conflict T2	Age variance	Proportion women	Worktime ratio (group/individual)	Group size
Group emotional awareness T1	3.34	.36	1	.50**	-.01	-.16	1.00**	.38**	.02	-.22*	.19	.20*	.29**	.17
Group emotion regulation T1	3.75	.34		1	-.31**	-.50**	.50**	.56**	-.25*	-.34**	0.10	.41**	.14	-.00
Task conflict T1	2.49	.47			1	.67**	-.01	-.35**	.68**	.55**	.18	.00	.05	.15
Relationship conflict T1	1.59	.39				1	-.16	-.52**	.45**	.59**	.05	-.18	-.12	-.02
Group emotional awareness T2	3.34	.36					1	.38**	.02	-.22*	.19	.20*	.29**	.17
Group emotion regulation T2	3.78	.36						1	-.48**	-.57**	.09	.22*	.16	-.02
Task conflict T2	2.49	.52							1	.69**	.19	.05	-.03	.16
Relationship conflict T2	1.69	.47								1	.08	.08	-.26**	.11
Age variance	-.003	0.09									1	.07	.38	.11
Proportion women	.45	.32										1	-.07	.00
Worktime ratio (group/individual)	2.79	2.09											1	-.03
Group size	4.71	1.38												1

*= significant at p<0.05; ** significant at p<0.01

Table 2. Results of the moderated mediation analysis investigating group emotional awareness at T1 as a moderator of the direct effect of task conflict at T1 on relationship conflict at T2 through group emotion regulation T2.

(a) Consequent

Antecedent	Group emotion regulation T2 (mediator)			Relationship conflict T2 (outcome)		
	Coeff.	SE	p	Coeff.	SE	p
Task conflict T1 (predictor)	−1.44	.56	.01	.30	.09	.00
Group emotional awareness T1 (moderator)	−.76	.42	.07	—	—	—
Task conflict T1 * Group emotional awareness T1	.41	.17	.02	—	—	—
Group emotion regulation T2 (mediator)	—	—	—	-.65	.10	.00
Relationship conflict T1 (control)	-.28	.10	.01	.22	.12	.08
Time ratio (control)	.01	.01	.64	-.05	.02	.00
Gender proportion (control)	.17	.10	.01	.28	.10	.02

(b) Conditional direct effects of task conflict (T1) on group emotion regulation (T2)

Group emotional awareness	Effect	SE	t	p	LLCI	ULCI
Low GEA	-.22	.10	-2.21	.03	-.42	-.02
Medium GEA	-.07	.08	-0.95	.34	-.23	.08
High GEA	.05	.09	.57	.56	-.13	.23

(c) Conditional indirect effects of task conflict (T1) on relationship conflict (T2) through group emotion regulation (T2)

Group emotional awareness	Effect	Boot SE	Boot LLCI	Boot ULCI

Low GEA	.14	.07	-.01	.27
Medium GEA	.04	.05	-.06	.14
High GEA	-.03	.06	-.16	.08

Note. Coeff.: coefficient; SE: standard error; LLCI: lower level of the 95% confidence interval; ULCI: upper level of the 95% confidence interval; levels of group emotional awareness: high (+1SD); medium (average); low (-1SD).